

notum broadly triangular, narrowly rounded anteriorly, smooth and shining, without parapsidal furrows. Median segment with six longitudinal carinæ, which are almost parallel and are continued on the face of the posterior truncation, the spaces between the carinæ transversely striated. First tergite elongate-triangular in the female, triangular in the male, with a lateral groove on each side from the base to beyond the middle; second tergite with an impressed transverse line behind the middle. Second abscissa of the radius a little longer than the second transverse cubital nervure.

*Hab.* Mackay, Queensland (*Turner*), February and March.

This is the only Australian species of the genus known to me, and no others appear to have been described, though species of the genus appear to be fairly numerous in New Guinea. The four genera dealt with in this paper appear to be Malayan immigrants, and do not seem to occur in the southern portion of Australia.

#### XXIV.—*Four new Species of Hedgehog.*

By OLDFIELD THOMAS.

(Published by permission of the Trustees of the British Museum.)

##### *Æthechinus angolæ*, sp. n.

General characters of *Æ. frontalis*, but markedly smaller.

Colour of the type about as in average examples of *Æ. frontalis*; the dorsal spines tipped with whitish; the crown, cheeks, and throat white, the belly black. Dorsal spines about half whitish, then black, with a light tip. No dependence can, however, be placed on colour, as not only does *frontalis* vary enormously in this respect in single localities, but, from what Bocage says, the same is evidently true of *angolæ*. The spines of the back are 19–20 mm. in length, and those of the crown about 22 mm.

Skull essentially as in *frontalis*, but smaller. The marked longitudinal groove along the frontal suture, present in every one of fifteen skulls of *frontalis*, is not, however, perceptible in the type of *angolæ*. There is also much less distance at the sides of the nasals between the tips of the premaxillary and frontal processes than is usual in *frontalis*. The distance is only 2.2 mm. in *angolæ*, while it is commonly 5–6 mm. in *frontalis*. This is, however, a variable character in all hedgehogs.

Dimensions of the type:—

Hind foot (s. u.) 27·5 mm.; ear 26 (measured on spirit-specimen).

Skull: condylo-basal length 46; zygomatic breadth 28·7; nasals  $13 \times 2\cdot4$ ; interorbital breadth 14; intertemporal breadth 11·8; postglenoid breadth 21·3; palatal length 26·5; upper tooth-series 23·3; combined length of  $p^4$ ,  $m^1$ ,  $m^2$  11.

*Hab.* Benguella, Angola.

*Type.* Adult male with worn teeth (in spirit). B.M. no. 64. 8. 16. 4. Collected and presented by F. F. Monteiro, Esq.

This hedgehog is that described by Dobson \* as *Erinaceus diadematus*, Fitz., but, as Anderson has shown, certainly cannot bear that name, which is a synonym of *Atelerix albiventris*. Further additional details about the type-specimen may, however, be found in Dobson's account.

Bocage's notice † of the Angolan hedgehog confirms its small size, for he speaks of an adult female with a hind foot only 25 mm. in length.

*Atelerix spinifex*, sp. n.

Near *A. spiculus*, but smaller.

External characters about as in *spiculus*, but with shorter foot. Ears whitish brown. Ends of spines drabby instead of white, but this may not be natural. Dorsal spines about 16–17 mm. in length, their basal and terminal thirds drabby, their middle third blackish.

Skull characterized by its small size, small brain-case, narrow conical muzzle, and widely and angularly expanded zygomata. No median groove on forehead.

Hind foot of type 24 mm.; ear (moistened) 23.

Skull: condylo-basal length 40; zygomatic breadth 25·8; nasals  $11 \times 2\cdot3$ ; interorbital breadth 12·8; intertemporal breadth 9·1; postglenoid breadth 20; palatal length 23; upper tooth-series 20·5; combined length of  $p^4$ ,  $m^1$ , and  $m^2$  9·3; breadth of  $m^1$  anteriorly 3·7.

*Hab.* of type. Illela, 95 miles north of Sokoto, Nigeria.

*Type.* Adult male with worn teeth. B.M. no. 4. 1. 14. 1. Collected May 1903, and presented by Capt. P. S. Lelean. One specimen.

The Museum possesses now several further examples, presented by Messrs. Fox and Langslow-Cock, of the North

\* Mon. Insect. p. 10 (1882).

† J. Sci. Lisb. (2) i. p. 25 (1889).

Nigerian hedgehog, and these are all very uniform with the original series from near Lake Chad, having a skull-length of about 43 mm., comparatively broad muzzles and evenly expanded zygomata. The little specimen from north of Sokoto, a fully adult male, appears therefore to be worthy of specific separation. So far as I am aware, it is the smallest hedgehog in the world.

*Atelerix kilimanus*, sp. n.

Allied to *A. hindei*, but smaller.

Colour essentially as in *hindei*, with a number of the dorsal spines white-ended, while the majority have drabby ends with the *extreme* tip dark. Hairy parts of body white, the muzzle and feet dark brown. Spines of back about 19 mm. in length, dark at their absolute base, then with a 5-mm. white band, a rather longer blackish one, a 3-mm. sub-terminal one, and a dark extreme point.

Skull of quite the same general shape as that of *A. hindei*, broad, with comparatively short muzzle and evenly widely expanded zygomata; in *albiventris* the skull is narrower, the muzzle longer and more slender, and the zygomata less expanded. In *sotikæ* the nasals are of unusual length, and the species is perhaps more nearly allied to *albiventris*.

Dimensions of the type (measured in the flesh):—

Head and body 174 mm.; tail 15; hind foot 25·5; ear 25.

Skull: condylo-basal length 42; zygomatic breadth 28·3; nasals 12·7 × 2·6; interorbital breadth 13·5; intertemporal breadth 10·8; postglenoid breadth 22·2; palatal length 24·7; upper tooth-row 20·2; combined length of  $p^1$ ,  $m^1$ , and  $m^2$  9·6.

*Hab.* Kilima-njaro. Type-series from Rombo, alt. 5300'.

*Type.* Adult female. B.M. no. 10. 7. 2. 38. Original number 1138. Collected 9th June, 1910, by Robin Kemp; presented by C. D. Rudd, Esq. Fourteen specimens.

The Kilima-njaro hedgehog is distinctly smaller than that of Kitui, and may be distinguished even by the size of the molars, the breadth of  $m^1$  (anteriorly) being in *hindei* about 4·4 mm., while in *kilimanus* it is about a millimetre less. Both are readily distinguishable from *albiventris* by their broader and more rounded skulls.

*Paraechinus amir*, sp. n.

Size about as in *P. macracanthus*. Colour and other external characters very much as in that species, the head

and chin hoary grey, the limbs and belly greyish black. Ears large, greyish white. Spines commencing in front on a level with the hinder edge of the ears. Dorsal spines elongate, about 37 mm. where longest, their surface rough, as usual in this genus, the basal fourth or third white, succeeded by a darker band 3-5 mm. in breadth, the remaining portion half white, with the terminal half black. None of the spines have light tips, and the general colour is consequently blackish.

Skull without the peculiar elongate narrowness of those of *P. hypomelas* and *macracanthus*, the zygomata about as widely bowed in proportion to the size of the skull as they are in *P. blanfordi* and *grayi*; the frontal regions also broader, while the intertemporal "waist" is narrower and more strongly marked. Nasals less strongly narrowed and prolonged posteriorly. Mesopterygoid fossa wider in front, more narrowed behind. Pterygoids more inflated and more approaching the extreme type found in *P. ethiopicus*, the parapterygoid fossæ consequently very shallow. In *hypomelas* and *macracanthus* these fossæ are deeper and more normal than in other species of *Paraechinus*. Bullæ rather higher than in the allied species.

Teeth apparently quite as in *macracanthus*.

Dimensions of the typical skull—the skin having no measures recorded and being so made that none can be taken :—

Greatest (condylo-basal) length 52 mm.; basal length 49; zygomatic breadth 30.2; nasals  $16 \times 3.6$ ; breadth across postorbital processes 15.5; intertemporal breadth 11.7; breadth across postglenoid processes 26.6; palatal length 27; breadth of mesopterygoid fossa 4.1; upper tooth-series 25; combined length of  $p^4$ ,  $m^1$ , and  $m^2$  12.

*Hab.* Kandahar, Afghanistan.

*Type.* Adult male. B.M. no. 81.8.16.3. Collected April 1881, and presented by Col. Chas. Swinhoe.

This specimen is that referred by Scully in 1881\* and again by Wroughton in 1910† to *Erinaceus macracanthus*, but it appears to me certainly distinct. It has not the peculiarly elongate non-constricted skull of that species, while the structure of its pterygoids, a most characteristic part in these animals, is more as in the other species of *Paraechinus*.

\* Ann. & Mag. N. H. (5) viii. p. 224 (1881).

† Journ. Bomb. N. H. Soc. xx. p. 82 (1910).